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## Exploring the Unseen: A Collective Emotional Framework in Entrepreneurial Orientation and Business Model Innovation

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### Abstract

Prevailing perspectives on entrepreneurial orientation (EO) and business model innovation (BMI) are mainly cognitive which hides the value of collective emotional framework in the creation of value through business innovation and entrepreneurial behavior patterns at the firm level reflecting risk-taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy. This research aims to recognize the role of organizational emotional capability (OEC) as an organization-level affective mechanism, by integrating three theories; affective events theory, intergroup emotions theory and affect infusion theory. Subsequent to the development of an integrative, organization-level framework, the relationship between OEC, EO and BMI are empirically tested by investigating 207 firms located in Istanbul. Specifically we found that OEC, provides a pertinent environment as well as characteristics for the organization leveraging the entrepreneurial orientation and business model innovations in organizations through establishing a collective identity, and emotional attachment. We then discuss the results and future research opportunities.

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**Keywords:** Organizational emotional capability, entrepreneurial orientation, business model innovation

### 1. Introduction

The emergence of entrepreneurial orientation (EO) as an organizational proclivity of making decisions and taking actions towards a continuous set of entrepreneurial behaviors (Covin and Wales, 2011) has enriched management and theory by offering a variety of perspectives (i.e. dispositional, behavioral) and a broad applicability regardless of the size, age or sector of the targeted organization. EO refers to the strategic positioning of the organizations based on a set of behavioral inclinations (Pearce et al., 2010) towards risk-taking, innovativeness, proactiveness, competitive aggressiveness and autonomy (Hughes and Morgan, 2007). Research on EO has gradually evolved and has reached a great potential in organization and management research, especially after a recent meta-analysis research suggesting that firm performance is dependent on EO (Rauch et al., 2009). There exist a wide variety of theoretical lenses which focus on explaining EO namely; subjectivist theory (Kor et al., 2007), dynamic capabilities theory (Zahra et al., 2006), entrepreneurial dominant logic based on the cognitive theory (Meyer and Heppard, 2000), and learning theory (Kreiser, 2011). However an emotional theoretical lens in understanding the phenomenon of EO has received relatively less attention by the entrepreneurship scholars with the exception of Baron (2008) suggesting that affect influences entrepreneurial processes, Morris et al., (2012) building his research on affective events theory to conceptualize entrepreneurship, Wolfe and Shepherd (2013) investigating the individual-level negative and positive emotions in EO

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taking place in sports context, and Biniary (2012) switching from individual to corporate-level emotions based on the interactions between entrepreneurs and non entrepreneurs. Indeed, it has been suggested more recently that "future research might examine how emotions influence the whole entrepreneurial process" such that individual level constructs such as emotional labor, emotion regulation and emotional intelligence began to receive scholarly attention (Cardon et al., 20012).

Nevertheless, empirical research on EO from a collective emotional perspective is a relatively unexplored area, indeed it is rarely recognized that regulation and execution of collective emotions at the organizational-level are predictors of EO. Thus, empirically investigating organizational emotional capability in achieving desirable entrepreneurial outcomes, how the ability of organizations to execute emotional dynamics influence the EO is suggested as a fruitful research domain (Huy, 2012; Cardon et al., 2012).

The importance of emotional capability has been resonating across diverse fields of organizational research including strategic management (Huy, 1999; Huy, 2011; Huy, 2012), organizational behavior (Elfenbein, 2007), technology and innovation management (Akgun et al., 2009), dynamic capabilities (Zahra et al., 2006). Recently studies have suggested emotions and affective events theory as a "hot topic" in the entrepreneurship research (Baron, 2008; Cardon et al., 2012). However, to our knowledge, the empirical analysis of EC variables' relationship with EO has not been conducted concerning the organizational-level.

Business model innovation (BMI) is defined as the designed system of activities through which firms create value (Zott and Amit, 2010). Recent research on BMI suggests that the value creation mechanisms of business models should be explored through a strategic entrepreneurial framework. Although, most of the research on BMI either investigate the concept from a rational positioning (i.e. deliberate managerial choices about the operation of organizations), evolutionary (i.e. emerge as a result of experimentation) or less commonly from a cognitive (i.e. managerial mental models and cognitive structures) view, novel sources of value creation through triggering BMI internally, warrant empirical investigation (Amit, Zott and Pearson, 2012). A recent research calls the attention of researchers on the affective mechanisms at various levels of analysis in the development of business model innovations (Demil et al., 2015). Therefore, there is a need to complement the existing research on BMI, by considering the role of emotional capability as an organizational-level affective mechanism which enhances the creation and capture of value o in the novelty of business models.

To address the above mentioned gaps in the literature we make two contributions to the literature through this research. First we position EO in an organizational-level emotional framework based on affective events theory (Weiss and Cropano, 1996; Weiss and Beal, 2005), intergroup emotions theory (Mackie et al., 2000) and affect infusion theory (Forgas, 1995). Particularly; how intra and extraorganizational events have affective consequences on organization members as to drive risk-taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy (i.e. entrepreneurial orientation) of the organizations. Yet, the convergence and sharing of the emotions do not always occur to the same degree throughout the organization. Therefore based on intergroup emotions theory we propose that, individual emotions diffuse through implicit (e.g. facial expressions and emotional contagion) and explicit (e.g. intentionally spreading emotions through verbal expressions) sharing processes enhancing the emotional identification of organizational members with the organization. This strengthens the "entrepreneurial soul", the sense of unity, wholeness within the organization thus encouraging the organization-level proclivity towards championing new ventures. Additionally, we draw on affective infusion theory (Forgas, 1995) to explain how organizational-level emotional dynamics outperforms those at the individual level forming strong group bonds and infusion of the top management's decisions with their social group generating a higher group solidarity and harnessing the energy of the collective (Muller, et al., 2014).

Second, following the call in the literature regarding the need for empirical investigation of novel sources of value creation through business model change (Demil et al., 2015), we empirically investigate the antecedents of BMI. Specifically, we empirically test the relationship of organizational emotional capability and EO with BMI. This integrative framework moves the existing BMI literature from a rational, perceptual or cognitive framework to a collective emotional framework also integrating the firm-level exhibition of sustained entrepreneurial behavioral patterns (i.e. risk-taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy) indicating EO.

## **2. Literature Research**

### *2.1. Organizational Emotional Capability*

The role of emotions in organizations have been recognized since the seminal works by Hochschild (1983) on emotional labor, Salovey and Mayer (1990) and Goleman (1998) on emotional intelligence, and Fineman (1993) on emotions in the context of organizations. Research have used organizational emotional capability construct to explain organization's "ability to recognize, monitor, discriminate and attend to emotions of employees at both the individual and the collective levels." Many scholars have emphasized that emotional capability in organizations are embedded within the norms and the routines of the organizations which arouse some resulting emotional states through organizational behaviors namely; emotional dynamics.

Organizational emotional capability is a capability that can be developed over time to manage and regulate organizational member's emotions in order to achieve greater performance and competitive advantage through radical change (Huy, 2011). Organizations through enactment of specific emotional dynamics translates this ability into routines and norms by the utilization of its resources and enables; i-) the recognition and direction of organizational members' emotions towards effective idea reproduction and higher performance, ii-) the convergence of organizational members' emotions in order to generate shared emotional experiences and iii-) development of niche for the effective expression, regulation and utilization of organizational members' emotions. Building upon the definition and conceptualization of organizational emotional capability and its characteristics within the organizational settings we propose that OEC is a complementary mechanism which based on affective events theory, intergroup emotions theory and affect infusion theory provides new insights to the existing research on entrepreneurial orientation (EO) and business model innovation (BMI).

OEC captures; emotional dynamics of encouragement, emotional dynamics of displaying freedom, emotional dynamics of playfulness, emotional dynamics of experiencing, emotional dynamics of reconciliation, and emotional dynamics of identification.

## 2.2. *Entrepreneurial Orientation*

Entrepreneurial orientation (EO) is a widely researched concept in organization and management literature since more than 30 years and mostly agreed among researchers as introduced by Danny Miller (1983) referring to the degree of firm's engagement in product-market innovation, undertaking risky ventures and adopting a proactive strategy in innovating with the aim of fundamentally outperforming competitors. EO as a firm-level construct determines the overall strategic posture of the organization rather than solely indicating a disconnected activity within the organization (Covin and Lumpkin, 2011). Although past research have suggested a dispositional framework in defining EO such that; "a firm-level disposition to engage in -risk-taking, innovativeness, proactiveness, competitive aggressiveness and autonomy- behaviors that lead to change in the organization or marketplace" (Voss et al., 2005: 1134), more recent research, suggests that EO should be regarded through a behavioral framework and "conceptualized as a set of distinct but related behaviors that have qualities of risk-taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy" (Pearce et al., 2010: 219). In this research we choose to view EO as a behavioral phenomenon for two reasons.

First, building on the very nature of entrepreneurial process, innate attributes, traits of psychological characters of entrepreneurs/entrepreneurial firms does not determine the degree of entrepreneurship rather it is dependent on decisions and actions (Heavey et al., 2009) which direct behaviors towards entrepreneurial processes (Covin and Slevin, 1991). Second, based on the affective events theory (Weiss and Cropanzano, 1996; Weiss and Beal, 2005), intergroup emotions theory (Mackie et al., 2000), and affect infusion theory (Forgas, 1995) although individual members of an organization experience diverse emotions sourced from inside or outside of the organization, intergroup interactions and strong organizational identification enable emotions to converge as a shared social emotion, forms and emotional attachment to the organization and build collective action readiness and group solidarity towards a common goal.

Revisiting EO from these theories' perspectives; firms do not perform on a rigid set of entrepreneurial characteristics at the organizational-level, rather evolve a continuous set of behaviors triggering entrepreneurial activity via collective emotions which form a strong social identity, arouse consensus, develop in-group prototypes of which organizational members act as embodiments (i.e. instead of behaving as unique individuals) and predict collective behaviors (Huy, 2012).

## 2.3. *Business Model Innovation*

The business model concept which refers to the logic of designed systems through which firms create, deliver and capture value (Zott and Amit, 2010; Teece, 2010; Zott et al., 2011) has started to gain prominence over the last two decades through the advent of Internet ventures (Demil et al., 2015). The concern on "how firms do business rather than what they do" has boosted the focus on business model innovation (BMI). BMI is a different innovation type which has the potential for higher value creation and capture since it is hard to imitate and transfer by the competitors because business models should match with the path-dependent strategy, culture and capabilities of the organization (Bucherer et al., 2012). As, the creation of value becomes more critical for firms, the understanding of how firms develop these rationally designed systems of activities namely; business models and how they change the existing ones, requires attention (Chesbrough, 2010; Zott and Amit, 2007; Zott et al., 2011). However, despite the intensification of the literature on business models, a reconciliation regarding its definitions is missing.

Timmers (1998:4) explicates that "a business model includes an architecture for the product, or service, an information flow, a description of the benefits for the business actors involved and a description of the sources of revenue." Chesbrough and Rosenbloom (2002), defined business model as the heuristic logic connecting technology to market outcomes with the aim of capturing economic value. Based on this definition business models have been regarded as boundary spanning systems of transaction and activities (Zott and Amit, 2010). Subsequently, literature offered various ways of thinking about business models. Zott et al. (2011) in their recent review of the literature presents a list of how the concept of business model has been referred. Accordingly business model have been accredited as (Zott et al., 2011); a

statement (cf. Stewart & Zhao, 2000), a description (cf. Applegate, 2000; Weill & Vitale, 2001), a representation (cf. Morris, Schindehutte, & Allen, 2005; Shafer, Smith, & Linder, 2005), an architecture (cf. Dubosson-Torbay, Osterwalder, & Pigneur, 2002; Timmers, 1998), a conceptual tool or model (cf. George & Bock, 2009; Osterwalder, 2004; Osterwalder, Pigneur, & Tucci, 2005), a structural template (cf. Amit & Zott, 2001), a method (cf. Afuah & Tucci, 2001), a framework (cf. Afuah, 2004), a pattern (cf. Brousseau & Penard, 2006), and a set (cf. Seelos & Mair, 2007). Indeed over time business models have been redefined to indicate systems of interdependent organizational activities executed by a central firm, consisting of components, linkages between components and dynamics (Martins et al., 2015). Indeed, BMI had evolved since its first emergence as the logic of the firm's doing its business, to a conceptual tool consisting of value proposition, operational model, financial model and customer relations.

Having established the ground for the relationship between OEC, EO and BMI we now turn our attention to how they relate to each other.

### 3. Hypotheses Development

#### 3.1. *Organizational Emotional Capability and Entrepreneurial Orientation*

To unravel how organizational emotional capability (OEC) shapes entrepreneurial orientation (EO) we propose a conceptual model where the construct encapsulating; emotional dynamics of encouragement, displaying freedom, and playfulness, and emotional dynamics of experiencing, reconciliation, and identification, differentially contribute to the EO.

We argue that OEC enhance EO through fostering hope and emotional motivation among organizational members, fueling inspirational communication between organizational members and leaders and facilitating emotional expressions and self reflection, necessary for the critical entrepreneurial thinking and tolerance to ambiguity. Organizational-level entrepreneurial behavior is triggered through the degree of novelty, disruption and meaningful difference from the status quo (Morris et al., 2012). This degree of interruption from the homeostatic state; capitalizes the willingness and opportunistic expansion of having a first mover advantage, encourages organizations for proactively taking action and exploiting emerging market rather (e.g. rather than focusing on the existing markets) (Pearce et al., 2010). The enactment of specific OEC dynamics promote a psychologically safe environment for organizational members where overcoming barriers and persistence is facilitated (Hahn et al., 2012). According to the intergroup emotions theory for instance firms cannot fully integrate cognitively, unless a reinforcing environment which constitutes a sense of security, psychological safety, closeness and enhanced dialogue exist among its members (Mackie et al., 2004). Emotionally capable organizations reinforce the convergence and generation of a shared state and mutual agreement of emotions and establish an attachment among organizational members to the collective and organizational identity (Barsade and Gibson, 2012). Particularly the organization-level set of feeling rules which indicate organizational emotion norms encourages the propagation of emotions and expressions of excitement, enthusiasm and passion (Barsade and Gibson, 2007). This means that when organizational members encounter a climate of psychological freedom and experimentation leveraging authenticity of emotions, they gain tendency towards seizing opportunities, proclivity towards risk-prone behavior, even in situations involving uncertainty, adopting bold, wide-ranging and exploitative acts (Covin and Wales, 2012). To the extent that such a mistake-tolerating, experiment oriented and reassuring environment prevents the paralyzing fear associated with stress, defensive avoidance resulting from constantly choosing the least reprehensible alternative (Huy, 1999) and minimized the emotional costs related to failing new ventures (Cardon et al., 2012).

OEC is essential in the development of EO as it enables the establishment of a common emotional focus, realization of mutual benefits of staying and acting as a collectivity, development of collective empathy which is activated at deeper, more intrinsic levels of the organization, and demonstrates altruistic and prosocial behaviors within the organization (Dutton et al., 1994). Overcoming distributed emotions, scattered emotional inclinations and displays; serves to harmonize the entrepreneurial efforts and direct attention towards high-high potential initiatives (Van Doorn et al., 2013). The shared emotional foci leverages the capacity of entrepreneurial behaviors to resonate, building a stronger willingness and passion to adopt an “undo-the-competitors” position and maximize the exploitation outcomes resulting from opportunities (Rauch et al., 2009).

According to the intergroup emotions theory; OEC aggregates organizational members' emotional states and builds an attachment to the organization. This facilitates the conservation of a strong organizational identity synchronous with social perspective taking, imaginative self-involvement and emotional responsiveness. This in turn enhances the emotional equanimity such that organizational members tend to have homogeneous emotions, feeling of unity, inherent bonding and a collective emotional energy released to serve for the benefits of organizational collectivity (Huy, 2005). The emotional equanimity optimizes entrepreneurial opportunity identification and exploitation outcomes (Ucbasaran et al., 2009).

OEC dynamics enable the persistence of organizational-level entrepreneurial behaviors reflecting risk taking, innovativeness, risk-taking, proactiveness, competitive aggressiveness, and autonomy such that, the whole organization as a unity is committed to and engages in that pattern of behavior rising entrepreneurial proclivity from an individual to a firm-level orientation (Covin and Lumpkin, 2011). Here, the strength of organizational members' identification with the

organizational collectivity generates a higher potential for opportunity identification as well as a superior quality of identified entrepreneurial opportunities (Gaglio and Katz, 2001). Particularly, the commitment to undertake necessary innovative, proactive, aggressive competition, risk taking and autonomous entrepreneurial behaviors are facilitated when there is a deeper emotional attachment, sense of unity, higher levels of collective empathy and reconciliation, by reviving positive and aspiring motives, in the mean time silencing negative, fear or stress based defensive avoidance at collective level (Morris et al., 2012). Therefore:

**H1.** A positive relationship exists between organizational emotional capability and entrepreneurial orientation.

### 3.2. *Entrepreneurial Orientation and Business Model Innovation*

We argue that entrepreneurial orientation (EO) enhances business model innovation (BMI) by generating endogenous shifts in the status quo perseverance of the organization. The collection of risk-prone, competition seeking and proactive organizational behaviors reinforces unprecedented turning points in the content, structure and governance of activity systems (Covin et al., 2006; Van Doorn et al., 2013; Zott and Amit, 2010). This means that; the selection of activities a firm performs, the ways in which these activities are executed indicating the inter-activity links, and the management mechanisms of those activities referring to the regulatory dynamics can be revolutionized through EO (Osterwalder et al., 2005; Chesbrough, 2010; Zott and Amit, 2010). Particularly EO anticipates entrepreneurial champions to turn conceptualized activity systems into implementation. Such that; EO decreases the detachment between planned and actualized business model innovations (Demil et al., 2015). Besides; EO leverages experimentation and probing for potential new business models, prior to any external change that renders their existing business model redundant (Chesbrough, 2010). The intentions and actions of key organizational players involved in the dynamic generative process of new venture generation, directed towards experimentation, encouraged change effort, ambitious novelty goals and learning opportunities drive the transformation of the firm's business model (Amit and Zott, 2012; Martins et al., 2015). Indeed, business model innovations require an ex ante foresight, significant trial and error, as well as an ex post adaptation. EO generates the indispensable freedom and independence for the employees as well as authority and responsibility to take entrepreneurial initiatives and engage in risky behavior, which reinforces timely decision-making and benefit from short-lived opportunities in the environment (Van Doorn et al., 2013). Therefore:

**H2.** A positive relationship exists between entrepreneurial orientation and business model innovation.

### 3.3. *Organizational Emotional Capability and Business Model Innovation*

We argue that organizational emotional capability fosters business model innovation through cultivating appropriateness and harmonious integration of emotions at the collective-level. According to the affective events theory, events emanates specific emotions in individuals within the organization, based on the degree of relevance of the particular event to the personal objectives and interests (Weiss and Cropanzano, 1996). Thus “emotions are activities of perceptual/motivational/affective systems” which lead to action tendencies having a guidance role in the selective information process. This selective information processing allows the emotional states to influence the decision outcomes (Muller, 2014). Particularly, organizational emotional capability, institutionalizes emotional routines selectively in specific situations of decision making allowing the organization to adopt only appropriate action tendencies by contingently regulating collective emotional arousals in radical change, uncertainty and riskiness of revolutionary business models (Huy, 1999; Fineman and Sturdy, 1999; Spoor and Kelly, 2004). Thus, the boundaries of how the firm creates and captures value through new business models is determined by the emotional appropriateness which develops a unique sense of exploiting potentially valuable activity system and the new ways of linking and managing those activities. Organizational emotional capability also facilitate external pressure regulation (Tankhiwale, 2009) and enables firms to operate in chaotic environments (Chesbrough, 2010). For example; this ability to better coordinate under risky, discontinuous and ambiguous conditions decreases the burden of cognitive loading, organizational inertia and path-dependence, therefore allowing the realization of value creating strategy (Casadesus-Masanell and Ricart, 2010).

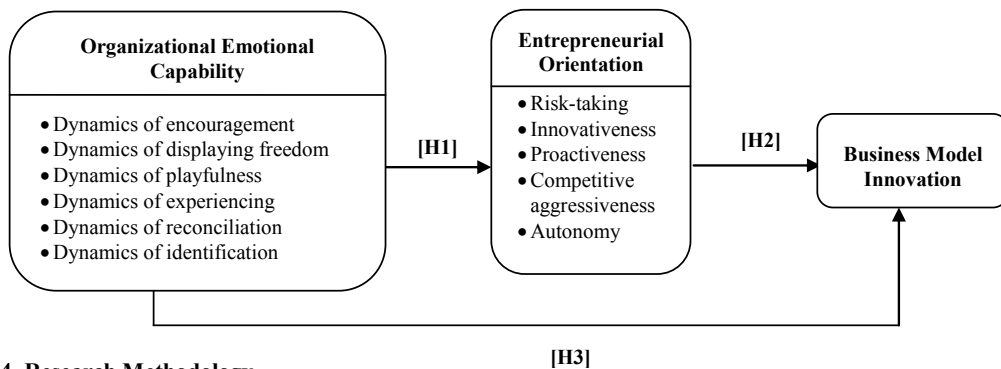
In addition to providing appropriate emotional state for the development of new business model, organizational emotional capability establishes harmonious integration of emotions at the organizational level facilitating the acceptance and internalization of “a new heuristic logic that connects technical potential with the realization of economic value” (Chesbrough and Rosenbloom, 2002: 529). Intergroup emotions theory suggests that through the interactions, among the organizational members, emotions are shared and converged (Mackie et al., 2004; Barsade, 2002). Indeed, shared emotional states bring organizational members closer together to constitute emotional solidarity, heighten the sense of cooperation and energize the collective acting mechanisms (Barsade and Gibson, 2012). For instance, emotionally capable organizations develop a group identification, motivating organizational members to define themselves by some attributes, behaviors or perspectives which represent the organization. This creates an emotional attachment which determines the extent to which emotional members feel, think and act collectively. For example, emotionally capable organizations developing a deeper understanding of the shared emotional state better articulate the logic that justifies the novel system of activities collectively, especially those radical ones. A deep attachment to the salient organizational characteristics



enacted in emotionally capable organizations, ameliorates conflicting decisions and disagreement and allows synergistic integration and alignment regarding the business model innovation (Muller et al., 2014). Therefore:

**H3.** A positive relationship exists between organizational emotional capability and business model innovation.

*Figure 1 Proposed Conceptual Model*



#### 4. Research Methodology

##### 4.1. Measures and Sampling

To test the above hypotheses, we adopted multi-item scales from prior studies for the measurement of the constructs. We used 5-point Likert scales ranging from ‘strongly disagree’ (1) to ‘strongly agree’ (5) to measure the variables in our conceptual model.

For organizational emotional capability (OEC) we adopted the question items from the study of Akgün et al., (2009). Based on the six dimensions of OEC, we asked three questions each for; dynamics of encouragement, dynamics of displaying freedom, dynamics of playfulness, dynamics of experiencing, dynamics of reconciliation, and two questions for dynamics of identification.

With respect to entrepreneurial orientation, we used the question items developed by Hughes and Morgan (2007). We asked three questions each for risk-taking, innovativeness, proactiveness and competitive aggressiveness dimensions and six questions for autonomy dimension.

The business model innovation questions were derived from Zott and Amit (2007). We asked five questions in order to assess the extent to which BMI offers new combinations of products, services and information, brings together new participants, links existing participants in novel ways, the degree of BMI’s other aspects novelty and the perception of being the first in the market with a specific BMI.

The initial sample consisted of 500 firms located in Istanbul using a stratified random sampling from the directory of Istanbul Chamber of Industry that have an affiliation with European firms. First, the general managers were contacted by telephone and the study’s objective was explained to them. We informed the respondents that their responses will remain anonymous and not be linked neither to them individually nor to their firms. This stage of transparency was aimed at increasing the motivation and willingness to cooperate without any fear of reprisals. Further we assured respondents that there were no rights or wrong answers, and included a cover story in order to prevent the respondents to think that the variables are correlated. These procedures reduced the respondents’ evaluation apprehension and decreased the likelihood to edit their responses thus resulting in more objective responses.

Of the 500 firms contacted 247 agreed to participate in the study. Of the 247 firms that agreed to participate, 234 completed the questionnaires. However 27 responses were omitted due to data screening purposes. Since we employed a cross-sectional research design and asked independent and dependent variable questions in the same survey, to control the internal validity, we asked the same questions on different pages of the survey. After data screening our analyzable sample consisted of 207 surveys. We compared the mean of variables, firm size, and ages of the eliminated surveys with the rest of the surveys used for the analysis, and found no statistical difference among them. In our sample, the respondents were senior employees/staffs (%); functional/department managers (31%); senior engineers (28%); product/project managers (19%); technical leaders (12%); general managers (6%); owners of the firm (4%). The incorporating industries were: finance (23%); automotive (16%); service (14%); food (13%); machinery and manufacturing (12%); communication (8%); information technologies (6%); metal (6%); pharmaceutical (5%); chemistry (4%); and textile (3%).

##### 4.2. Analysis and Results

After data collection, the measures were subjected to a purification process to assess their reliability and validity (Anderson and Gerbing, 1984; Fornell and Larcker, 1981). A confirmatory factor analysis was conducted including 37 measured items of ten variables in AMOS 5. The resulting measurement model from the CFA indicated that the model

adequately fit the data;  $\chi^2(535) = 864.99$ , comparative fit index (CFI) = .92, incremental fit index (IFI) = .92, Tucker-Lewis Index (TLI) = .91,  $\chi^2/df = 1.617$ , and root-mean-square error of approximation (RMSEA) = 0.55. In addition, all items loaded significantly on their respective constructs (with loadings that vary between 0.564 and 0.902), providing support for convergent validity.

Next, in order to assess the discriminant validity, we performed a series of two-factor models (Bagozzi, Yi, and Phillips, 1999), in which individual factor correlations were restricted to unity one at a time<sup>1</sup>. The fit of the restricted models was compared with that of the original model. We found that the chi-square change ( $\Delta\chi^2$ ) in each model, constrained and unconstrained, were significant,  $\Delta\chi^2 > 3.84$ , suggesting that constructs demonstrate discriminant validity. We also evaluated the reliability and validity of the constructs in our model. The reliabilities of the multiple-item, reflective measures, along with, construct correlations, average variance extracted (AVE) for each variable and AMOS-based composite reliabilities are well beyond the threshold levels (Fornell and Larcker, 1981). Also the squared root of AVE for each construct was greater than the latent factor correlations between pairs of constructs suggesting discriminant validity. The results indicate that measures are unidimensional and have adequate reliability and discriminant validity.

#### 4.3. Hypothesis Testing

To test our hypotheses, we performed structural equation modeling (SEM) analysis having maximum likelihood-based estimation procedures. Consistent with our concept development section, we allowed the parameters representing the covariances across organizational emotional capability (OEC) variables to be free. We also allowed entrepreneurial orientation variables to be covariant among each other. We found that the covariance among EO and OEC variables was significant, indicating that these variables occur simultaneously and affect each other. Path Model in Table 1 demonstrates the relationships among OEC, EO and business model innovation. Regarding the role of OEC on EO, we found that OEC is positively associated with EO, supporting H1 ( $\beta = .35$ ,  $p < .01$ ). Addressing the hypothesis pertaining to the relationship between EO and BMI, we found that EO is positively associated with BMI, supporting H2 ( $\beta = .27$ ,  $p < .05$ ). Finally regarding H3, our results reveal that there is a positive relationship between OEC and BMI ( $\beta = .44$ ,  $p < .05$ ). Additionally, our results indicate that OEC explains; 53% of variance in entrepreneurial orientation (i.e., quantify how much regression line is useful to predict (or model) OEC) and 42% variance in BMI. Further OEC and EO together explain 46% of variance in BMI.

Table 1. Results of the structural equation modelling analysis

	Relationship	Model 1	Result
Hypothesis 1	Organizational Emotional Capability → Entrepreneurial Orientation	.83***	Supported
Hypothesis 2	Entrepreneurial Orientation → Business Model Innovation	.27**	Supported
Hypothesis 3	Organizational Emotional Capability → Business Model Innovation	.30**	Supported
		$\chi^2(539) = 826.42$ , $\chi^2/df = 1.53$ , IFI = .93, CFI = .93, RMSEA = .051	

Path coefficients are standardized.

\* $p < .1$ , \*\* $p < .05$ , \*\*\* $p < .01$

#### 5. Discussion and Conclusion

This research offers a new insight to the entrepreneurship and business model innovation literatures by exploring the organizational-level affective framework. The results of the empirical research reveal that although unexplored the role of organizational-level emotions captured through organizational emotional capability (OEC) have positive relationship both the entrepreneurial orientation (EO) and business model innovation (BMI). First this research offers a theoretical basis for the understanding of how OEC and EO are linked. Integrating the affective events theory, intergroup emotions theory and affect infusion theory for the achievement of a deeper understanding on an unexplored topic, this research aimed to develop an alternative, complementary framework on what drives entrepreneurial orientation and business model innovation. Drawing on the affective events theory, we explicate that particular events from inside or outside the organization arouse emotions within the organization which increases the likelihood of adopting behavioural patterns

<sup>1</sup> Due to the page limitations the tables could not be included. The relevant statistics and parameter values are shortly mentioned in the text.

reflecting entrepreneurial orientation. Second, we draw on intergroup emotions theory to offer an insight on how individual emotional states converge and unify to represent an organizational identification among organizational members. We argue that this leverages the shift from individual entrepreneurship proclivity towards a collective emotional identification which galvanizes the solidarity towards organization level EO. Third, we propose that based on affect infusion theory, the entrepreneurial process and decisions infuses with the emotional states of the organizational members as a whole such that promoting the likelihood of risk-taking, innovativeness, competitive aggressiveness, proactiveness and autonomy. These theoretical constructions are supported with an empirical examination executed on 207 firms selected in the Istanbul area. Further we investigate; how do organizations generate business model innovations besides the traditionally focused concepts such as rational decision making, evolutionary experimentation or cognitive mental models. Indeed this research explores the hidden value affective mechanisms (i.e. OEC) have in favouring the value creation through BMI. To complement the existing research on EO and BMI, the role of emotional capability as an organizational-level affective mechanism which enhance the creation and capture of value through the novelty of business models is both theoretically and empirically investigated. Hence this research moves the current perspectives both on EO and BMI to a new level; from cognitive to an affective level and from individual to collective and organizational-level.

We acknowledge that our research is not exempt from some theoretical and methodological limitations.. Specifically, our research is prone to common method bias since; the dependent variable in the survey was answered by the same respondents who answered the independent variable questions, in a cross-sectional manner. Second, as with all cross-sectional research, the relationship tested in this study represents a snapshot in time. While it is likely that the conditions under which the data were collected will essentially remain the same, there are no guarantees that this will be the case. Third this research is done in Turkey hence the results reported here emerge from a local area and a specific cultural, dispositional background and may differ for firms operating in different cultural, environmental and political conditions. Despite these limitations this study provides important implications in the context of a developing country from theoretical and practical perspectives. Future research can focus on integrating different perspectives such as cognitive and affective in the exploration of how entrepreneurial orientation and business model innovation emerges. Also future research can empirically test the mediating role of EO in the relationship between OEC and BMI. Besides, future research can also attempt to follow a longitudinal study where it investigates the long term entrepreneurial behavior patterns, and novel activity systems namely business model innovations.

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